

30 August 2004

Subject: National Centers of Academic Excellence in Information Assurance Education
7th Annual Call for Applications

Dear Colleagues:

Mr. Amit Yoran, Director, National Cyber Security Division, Department of Homeland Security (DHS), and I are pleased to announce the 7th annual call for applications for the National Centers of Academic Excellence in Information Assurance Education Program. This outreach program was initially designed and operated by the National Security Agency (NSA) in the spirit of Presidential Decision Directive 63, National Policy on Critical Infrastructure Protection, May 1998. The program is now co-sponsored by NSA and DHS in support of the President's National Strategy to Secure Cyberspace, February 2003. The program retains the goal of reducing vulnerabilities in our national information infrastructure by promoting higher education in information assurance, and producing a growing number of professionals with information assurance expertise in various disciplines.

Currently, there are 59 National Centers of Academic Excellence in Information Assurance Education in 27 states across the country. The list of these prestigious universities, by state, may be found on the program web site at <http://www.nsa.gov/ia/academia/acade00001.cfm>. In recognition of the dire need for information assurance education to contribute to the protection of the national information infrastructure, I hope to expand the program to eventually include at least one Center in every state. The President's National Strategy to Secure Cyberspace refers to cyberspace as the nervous system of our Nation's critical infrastructures, and indicates that the healthy functioning of cyberspace is essential to our economy and our national security.

Information on the 7th annual program offering, criteria, and application procedures is attached. Applications are due by 15 December 2004. Assistance may be obtained from Dr. William V. Maconachy, Manager, National Information Systems Security Education and Training Program, (410) 854-6206, w.macona@radium.ncsc.mil. We welcome your participation.

Sincerely,

/s/
DANIEL G. WOLF
Information Assurance
Director

Encl:
a/s

June 2004

**NATIONAL CENTERS OF ACADEMIC EXCELLENCE IN
INFORMATION ASSURANCE EDUCATION (CAEIAE) PROGRAM**
Open to Nationally or Regionally Accredited 4-year Colleges and Universities
for Graduate and Undergraduate Level Programs

INTRODUCTION: The National Centers of Academic Excellence in Information Assurance Education Program is an outreach program designed and operated initially by the National Security Agency (NSA) in the spirit of Presidential Decision Directive 63, National Policy on Critical Infrastructure Protection, May 1998. The program is now jointly sponsored by the NSA and the Department of Homeland Security (DHS) in support of the President's National Strategy to Secure Cyberspace, February 2003. The goal of the program is to reduce vulnerability in our national information infrastructure by promoting higher education in information assurance (IA), and producing a growing number of professionals with IA expertise in various disciplines.

AUTHORITIES: The program operates under authority of Public Law 106-398 and National Security Decision Directive 42, National Policy for the Security of National Security Systems, July 1990.

DEFINITION: Information Assurance (IA) concerns information operations that protect and defend information and information systems by ensuring availability, integrity, authentication, confidentiality, and nonrepudiation. This includes providing for restoration of information systems by incorporating protection, detection, and reaction capabilities. (National Security Telecommunications and Information Systems Security Instruction (NSTISSI) No. 4009, January 1999)

PROGRAM BENEFITS: Benefits to Academia: Colleges and universities designated as National Centers of Academic Excellence in Information Assurance Education will receive formal recognition from the United States Government, along with the associated prestige and opportunities for publicity. This recognition will be in the form of an official Government certificate. National Centers of Academic Excellence in Information Assurance Education are eligible to apply for scholarships and grants through both the federal (<http://www.ehr.nsf.gov/duet/programs/sfs/>) and Department of Defense (<http://www.defenselink.mil/nii/iasp/>) Information Assurance Scholarship Programs. *Designation as a Center does not carry a commitment for funding from the NSA or the DHS.*

Benefits to the Nation, the National Security Agency, the Department of Homeland Security and other Federal Departments and Agencies: The program is intended to assist in meeting national demand for a cadre of professionals with information assurance expertise in various disciplines. These professionals will enter the workforce better equipped to meet challenges facing our national information infrastructure. National Centers of Academic Excellence in Information Assurance Education may become focal points for recruiting individuals with information assurance expertise. The Centers may also create a climate and foci to encourage independent research in critical information assurance areas.

APPLICATION PROCEDURES AND REQUIREMENTS:

1. The National Centers of Academic Excellence in Information Assurance Education Program is offered annually and is open to nationally or regionally accredited 4-year colleges and universities for their graduate and undergraduate programs.
2. Applicants must submit a letter of their intent to apply, along with evidence of accreditation. The letter must be on official college/university letterhead; signed by a collegiate official at an appropriate level (Dean or higher); and postmarked not later than the application due date. The mailing address follows:

National Security Agency
Attn: Dr. William V. Maconachy, I02E
9800 Savage Road, SAB 3
Fort Meade, MD 20755-6744

3. Applicants must possess current certification under the Information Assurance Courseware Evaluation Program (<http://www.nsa.gov/ia/academia/iace.cfm?MenuID=10.1.1.1>). The criteria for the National Centers of Academic Excellence in Information Assurance Education Program (<http://www.nsa.gov/ia/academia/caeCriteria.cfm?MenuID=10.1.1.2>) provide specific information on this prerequisite. Applicants are encouraged to apply for the Information Assurance Courseware Evaluation Program as soon as possible, and should allow six weeks for evaluation under this program. The Information Assurance Courseware Evaluation Program Manager may be reached on 410-854-6206.
4. Use of the on-line application process is required. A password allowing access to the on-line process may be obtained by contacting the National Centers of Academic Excellence in Information Assurance Education Program Office on 410-854-6206. The electronic process enables the submitting institution to have multiple individuals participate in the entry of data, while giving the lead individual the ability to review all data and electronically submit the application. The process is intended to simplify the submission of data; create thorough and uniform submissions; and enhance the review process.
5. Applicants must clearly demonstrate, in sufficient detail, how they meet each of the ten program criteria, and include supporting documentation where required and appropriate.
6. Applications are due to the program office by 15 December 2004.

REVIEW AND SELECTION PROCEDURES:

1. Qualified information assurance professionals from the National Security Agency, the Department of Homeland Security, and the Committee on National Security Systems will assess applications. Other qualified individuals will be invited to assess applications, as needed.
2. Applications will be rated independently using the point system identified in the criteria. Points will be consolidated, and a point spread average will be assigned.
3. Applicants will receive written notification of the determination late March or early April.
4. Qualifying colleges and universities will be designated as National Centers of Academic Excellence in Information Assurance Education for a period of 3 academic years, after which they must successfully reapply in order to retain the designation.

REFERENCES:

National Security Agency:

<http://www.nsa.gov/>

National Information Systems Security Education and Training Program:

<http://www.nsa.gov/ia/academia/acade00001.cfm>

Department of Homeland Security

<http://www.dhs.gov>

Committee on National Security Systems (Formerly National Security Telecommunications and Information Systems Security Committee):

<http://www.nstissc.gov/>

Colloquium on Information Systems Security Education:

<http://www.ncisse.org>

National Policy on Critical Infrastructure Protection, May 1998:

<http://www.FEDCIRC.gov/library/legislation/presDecDirective63.html>

The National Strategy to Secure Cyberspace

<http://www.whitehouse.gov/pcipb/>

Department of Defense Information Assurance Scholarship Program:

<http://www.defenselink.mil/nii/iasp/>

Federal Scholarship for Service Program:

<http://www.ehr.nsf.gov/duet/programs/sfs/>

Information Assurance Courseware Evaluation Program:

<http://www.nsa.gov/ia/academia/iace.cfm?MenuID=10.1.1.1>

Public Law 106-398 as codified at 10 U.S.C. § § 2200-2200f.

<http://uscode.house.gov/DOWNLOAD/10C112.DOC>

POINT OF CONTACT FOR ADDITIONAL INFORMATION:

Dr. William V. "Vic" Maconachy

Phone: (410) 854-6206

E-mail: w.macona@radium.ncsc.mil

June 2004

**NATIONAL CENTERS OF ACADEMIC EXCELLENCE
IN INFORMATION ASSURANCE EDUCATION (CAEIAE) PROGRAM
CRITERIA FOR MEASUREMENT**

The National Centers of Academic Excellence in Information Assurance Education Program is open to nationally or regionally accredited 4-year colleges and graduate-level universities. Applications must be submitted electronically via the on-line application process. Applications are assessed against ten criteria, listed below, which are intended to measure the depth and maturity of programs of instruction in information assurance (IA) at the graduate and undergraduate levels. Applicants must clearly demonstrate how they meet each of the ten criteria. Minimum requirements for each of the ten criteria must be met in order to obtain designation. Successful applicants are designated as a National Center of Academic Excellence in Information Assurance Education for a period of 3 academic years, after which they must successfully reapply in order to retain the designation. The criteria is reviewed annually and strengthened as appropriate to keep pace with the evolving nature of IA. *(Designation as a National Center of Academic Excellence in IA Education does not carry a commitment of funding from the National Security Agency or from the Department of Homeland Security.)*

Prerequisite: Prior to submitting an application for the CAEIAE Program, IA courseware must be certified under the IA Courseware Evaluation Program (<http://www.nsa.gov/ia/academia/iace.cfm?MenuID=10.1.1.1>) as meeting National Security Telecommunications and Information Systems Security Standards (<http://www.nstissc.gov>) and the certification must be current. Specifically, certification of NSTISSC Training Standard 4011 is required, and certification of at least one additional NSTISSC Training Standard (4012, 4013, 4014, 4015 or subsequent standards) is required.

1. Provide evidence of partnerships in IA education with minority colleges and universities, 2-year community colleges and technical schools. (Example of evidence: memorandum of agreement between both parties)
(The U. S. Department of Labor (<http://www.dol.gov/osbp/programs/mcu.htm>) refers to minority colleges and universities as including Historically Black Colleges and Universities, Hispanic Serving Institutions, and Tribal Colleges and Universities.)

Overall Point Value: 10 Minimum Required / 15 Maximum Available

- a. Shared curriculum (Example: IA teaching materials provided)
Point Value: Up to 5 points
- b. Shared faculty (Example: Faculty on curriculum development committee and/or teaching IA at minority institutions)
Point Value: Up to 5 points

(Shared faculty w/minority institutions may be counted in both criteria 1 and criteria 10.)

- c. Reciprocity of credits (Example: Accepting academic credit in IA courses from minority institutions)

Point Value: Up to 5 points

- 2. The academic program demonstrates IA is not treated as a separate discipline, but as a multidisciplinary science with the body of IA knowledge incorporated into various disciplines.

Overall Point Value: 20 Minimum Required / 30 Maximum Available

- a. Evidence IA is taught as modules in existing courses and that non-technical/non-IA students are being introduced to IA, i.e. courses for managers/leaders. (Example: Law school provides instruction on security countermeasures IT systems to help assure privacy)

Point Value: Up to 3 points per course / Maximum 15 points

- b. IA concentration programs require non-technical courses of study, i.e., ethics, policy, legal, human performance, math, business. (Example: Computer Science/IA majors take business law/ethics courses.)

Point Value: Up to 3 points per course / Maximum 15 points

- 3. The academic program demonstrates how the university encourages the practice of IA, not merely that IA is taught.

Overall Point Value: 15 Minimum Required / 25 Maximum Available

- a. Copy of university or departmental IA security plan.

Point Value: Up to 10 points

- b. Evidence of IA Awareness Program for faculty and students. (Example: Computer Based training; required on-line tutorial, etc.)

Point Value: Up to 10 points

- c. University appointed Information Systems Security Officer.

Point Value: 5 points

- 4. The academic program encourages research in IA. Provide examples.

Overall Point Value: 15 Minimum Required / 35 Maximum Available

- a. Program with IA concentrations has thesis, dissertation, or project requirements. Concentrations include declared majors, declared minors, established certificates of study within a major and produce research. Provide titles of thesis, dissertation, or projects in IA.

Point Value: Up to 10 points

- b. Individual IA courses require research paper(s) or projects(s). Provide titles of thesis, dissertation, or projects in IA.

Point Value: Up to 5 points per course / Maximum 15 points

- c. Non-IA courses encourage papers in IA topics or projects. Provide titles of thesis, dissertation, or projects in IA.
(Example: Criminal Justice encourages Forensics as a paper topic)
Point Value: 2 points per course / Maximum 10 points

- 5. The IA curriculum reaches beyond the normal geographic borders of the university.
(Web site for sharing IA resources and/or internet classes outside normal borders.)
Overall Point Value: 15 Minimum Required / 50 Maximum Available

- a. IA curriculum web site.
Point Value: Up to 10 points
- b. Use of distance education technology and techniques to deliver IA courses.
Point Value: Up to 20 points
- c. Sponsorship of regional or national IA curriculum workshops, colloquia, etc.
Point Value: Up to 15 points
- d. Professional studies program leading to certificate in IA.
(Example: Students can engage in graduate studies in IA without completing a Masters Degree)
Point Value: 5 points

- 6. It is clearly demonstrated that the faculty is active in current IA practice and research, and contributes to IA literature. Substantiate depth and length of faculty expertise through submission of biographies.
Overall Point Value: 20 Minimum Required / 30 Maximum Available

- a. Published papers on IA topics within refereed journals or peer reviewed conference proceedings. Provide abstracts, dates, and identify where published.
Point Value: 2 points per paper / Maximum 10 points
- b. Faculty awarded grants for IA education and/or research development. Provide synopsis of IA related grants and dates.
Point Value: 2 points per grant / Maximum 10 points
- c. Faculty and or student presentations on IA topics at regional or national conferences. Provide abstracts, dates, identify conferences, and distinguish faculty vs. student presentations.
Point Value: 2 points per presentation / Maximum 10 points
- d. Provide biographies to substantiate depth and length of faculty expertise.

- 7. The university library and reference systems/materials and/or the IA Center maintain state of the art IA resources.
Overall Point Value: 20 Minimum Required / 30 Maximum Available

- a. Evidence of access to current INFOSEC educational text books, monographs, reports, and journals, including those in supporting areas such as Audit and Control.

Point Value: Up to 15 points

- b. Evidence of archive or access to historical IA documents.

Point Value: Up to 15 points

8. Academic program, within a nationally or regionally accredited 4-year college or graduate-level university, has declared concentrations in IA. Identify the courses required for each concentration, provide syllabus, enrollment data for current academic year (not projected) and actual graduation data (not projected) for the past two academic years.

Overall Point Value: 30 Minimum Required / 150 Maximum Available

Declared Concentrations

1. Concentration on IA at the BS level.

- a. Enrolled (current academic year)

Up to 10 points

- b. Graduated (past 2 academic years)

Up to 20 points

Point Value: Up to 30 points

2. Concentration on IA at the MS level.

- a. Enrolled (current academic year)

Up to 20 points

- b. Graduated (past 2 academic years)

Up to 30 points

Point Value: Up to 50 points

3. Concentration on IA at the Ph.D. level.

- a. Enrolled (current academic year)

Up to 30 points

- b. Graduated (past 2 academic years)

Up to 40 points

Point Value: 70 points

9. The university has a declared center for IA education or a center for IA research from which IA curriculum is emerging. The center may be school or university-based. Provide documentation of the designation.

(Example: The Computer Science Department has an officially designated “Center for IA Studies” with a clear link to and sponsorship by the College of Engineering Sciences, with a charter signed at least at the College of Engineering level)

Overall Point Value: 35 Minimum Required / 50 Maximum Available

- a. School Level

Point Value: 35 points

- b. University Level
Point Value: 50 points

- 10. University IA faculty consists of more than one individual devoted full time to IA. Includes shared and cross-departmental appointments for part-time and adjunct faculty. This may include institutional agreements for cooperative use/exchange of adjunct faculty from/between universities.

Overall Point Value: 25 Minimum Required / 30 Maximum Available

- a. Identify by name full-time faculty member working full time in IA with overall responsibility for the IA Program.
Point Value: 10 points required
- b. Additional full-time faculty member working full time in IA
Point Value: 5 points each/5 points required/10 maximum available
- c. Shared faculty (e.g. intra or inter departmental or other 4-year graduate university)
Point Value: 5 points each / 5 maximum available
- d. Each adjunct/part-time faculty
Point Value: 5 points each /5 maximum available

Total MINIMUM Point Requirement = 205

Total MAXIMUM Points Available = 445

MINIMUM POINTS REQUIRED TO QUALIFY AS COE=205

June 2004

**NATIONAL CENTERS OF ACADEMIC EXCELLENCE
IN INFORMATION ASSURANCE EDUCATION PROGRAM
Frequently Asked Questions Related to Program Criteria**

1. What is the objective of program criteria?

The criteria are designed to measure and recognize the depth and maturity of Information Assurance (IA) academic programs, and to stimulate the development of broad-ranging IA programs in order to meet the varying needs of the student population, including work-force professionals, as well as the employment needs of government and industry. Institutions successfully meeting the criteria are “designated” as National Centers of Academic Excellence in Information Assurance Education by the Department of Homeland Security and the National Security Agency. The criteria are not designed to the discriminating level required of programs offering a specific “accreditation” or “certification.” Accreditation and certification establish a minimum set of criteria to assure that a basic level of quality instruction is provided in a field of study. National Centers of Academic Excellence in Information Assurance Education are expected to be National role models.

2. How do Information Assurance (IA) and Information Systems Security (INFOSEC) differ and are the terms used interchangeably in the criteria?

Information Assurance is the preferred skill. There is a national movement from Information Systems Security to the more complex discipline of Information Assurance. Recognizing the current state of transition, the terms are used interchangeably in the criteria. Definitions from National Security Telecommunications and Information Systems Security Instruction (NSTISSI) No. 4009, August 1997, follow:

Information Assurance (IA) – Information operations that protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality, and non-repudiation. This includes providing for restoration of information systems by incorporating protection, detection, and reaction capabilities.

Information Systems Security (Information Security, ISS, INFOSEC) – Protection of information systems against unauthorized access to or modification of information whether in storage, processing or transit, and against the denial of service to authorized users, including those measures necessary to detect, document, and counter such threats.

3. How were the criteria developed?

The criteria were developed by the National Security Agency in consultation with key information assurance representatives from academia, industry, and government.

4. Why were the original criteria, dated November 1998, revised?

Due the dynamic nature of the field of Information Assurance, the criteria are assessed annually. The criteria are revised to raise the program standards and keep pace with the increasing depth and maturity of university programs in IA.

5. Why do the criteria reflect an emphasis on research?

Research-based education versus textbook centric instruction develops a much needed skill set and contributes to meeting national research needs.

6. Is it appropriate to use the same criteria for graduate and undergraduate programs?

Recognizing that graduate and undergraduate programs address differing levels of depth, their treatment in the same criteria is deemed appropriate at this time. Within the criteria, there is reason for discerning differences.

7. Why is there an emphasis on graduate programs?

The critical demand for IA education as well as IA faculty demands an emphasis on graduate programs.

8. Why is there an emphasis on distance learning?

Distance learning is an effective means to meet the needs of the global work force.

9. Why is consideration being given to certificate programs?

Certificate programs in IA are expanding to meet the IA educational needs of the work force population and their contribution to advancing the state of IA education for the current work force cannot be overlooked. These customized programs recognize the dynamic nature of IA and provide state-of-the-art educational benefits immediately applicable on the job.

10. How does one define a concentration of study?

The ever-changing nature and complexity in providing information assurance to heterogeneous distributed systems requires focused study. This study, while multidisciplinary in nature, should be steeped in technology. Concentrations of study in universities allow for this in-depth study. Concentrations range from majors within majors, to minors within minors, to simply a declared set of elective choices of study from which a student can choose. Evidence that a university has given thought to the scope, sequence, and content of such concentrated study should be recognized.

11. Can two or more universities partner to meet the criteria?

Applications based on partnerships will be considered; however, designation as a National Center of Academic Excellence in Information Assurance Education may only be granted to the lead university where the declared Center for Information Assurance Education resides. The certificate of designation would reflect the lead university and also recognize the collaborating institution. Note: Collaborating schools will only be recognized when sufficient evidence reflects that students from both schools have complete unfettered access to the complete IA curriculum.

12. What if a university has two schools, each with declared IA Centers?

Can those schools within a university each be declared as a National Center of Academic Excellence in IA Education?

National Centers of Academic Excellence in Information Assurance Education are declared at the university level. In a university which has multiple programs, each of significant strength in teaching IA, inter program

collaboration is highly encouraged. An example of this collaboration might be for those individual IA Centers to be pulled under the umbrage of an institute.

The National Centers of Academic Excellence in Information Assurance Education Program provides increased availability of learning in Information Assurance (IA) Education through a network of leading institutions and authorities in IA education.